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ABSTRACT

The basic thesis of this study was that class position in society is a determinant of the extent to which education can be transformed into income, i.e., that many of the commonly observed racial differences in income returns from education are a consequence of the distribution of social groups into class categories. More specifically, the hypotheses were that: (1) managers would have much higher returns from education than workers; (2) black males would be more concentrated in the working class than white males; (3) black males would receive lower returns from education than white males when class position was ignored; (4) within the working class, the returns from education for black and white males would be much more similar than for all blacks and all whites; (5) within the supervisor category, the returns from education for black and white males would be more similar than for all blacks and all whites; and, (6) within the managerial category, black males would have lower returns from education than white males. While in the original year of the study, the sample was a random one of 5,000 households active in the labor force, the sample was no longer genuinely random by the eighth year due to successive non-responses. Data was collected on income, education, occupational status, age, seniority, father's status, father's education, parental economic condition, and annual number of hours worked. An analysis of the data by regression equations confirmed the hypotheses. It was concluded that the differences in economic returns from education between black and white males largely disappear when the regression equations are run within class positions. (Author/BS)

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INSTITUTE FOR RESEARCH ON POVERTY DISCUSSION PAPERS

RACE, CLASS AND INCOME INEQUALITY

Erik Olin Wright

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RACE, CLASS AND INCOME INEQUALITY

Erik Olin Wright

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ABSTRACT

The basic thesis of this paper is that class, as understood within the Marxist tradition--common positions within the social relations of production--mediates racial differences in income returns to education. That is, class position is viewed as a determinant of the extent to which education can be transformed into income, and thus it is hypothesized that much of the commonly observed racial differences in returns to education are a consequence of the distribution of racial groups into class categories. The basic results of the study strongly confirm this perspective: the differences in returns to education between black and white males largely disappear when the regression equations are run within class positions.

RACE, CLASS AND INCOME INEQUALITY

One of the most consistent findings of research on racial inequality is that black males get considerably lower income returns to education than do white males. Weiss [1970:154] found that within specific age groups, black males got significantly lower returns to education than white males, whether education was measured as years of schooling or as achievement level. Siegel [1965] found that, net of occupation and region of the country, the difference in expected incomes of black and white males increased monotonically with education: at less than elementary education, in 1960 blacks earned $700 less than whites (net of occupation and region); at the high school level this increased to $1400; and at the college level, to $3800. Duncan [1969] has shown that even after controlling for family background, number of siblings, and occupational status, black males still receive lower returns to education than white males.[1]

None of these studies, however, has controlled for class position as understood within the Marxist tradition, i.e., the position of individuals within the social relations of production. The underlying premise of a Marxist class analysis is that while the diverse dimensions of social inequality cannot be reduced to class inequality, nevertheless class relations play a decisive role in shaping other forms of inequality. In the study of income inequality this implies that class relations organize the structure of income inequality in the sense that class position shapes the ways in which other causes influence income. If this notion is correct, then an analysis of racial differences in income that ignores positions within the social relations of production is incomplete. More concretely, if it is true that the returns to education are considerably different within different class positions, and if it is true that black and white males are distributed

quite differently across class positions, then much of the racial differences in returns to education could in fact be a consequence of the class distribution of races. This paper will explore such a possibility.

Operationalizing Class

Before developing a series of explicit hypotheses about the interactions of race and class in the income determination process, it is necessary to discuss briefly how the Marxist notion of class will be operationalized in this study.[2] When non-Marxists use the term "class," they generally use it to designate groups of people who share common "life chances" or market positions [Weber, 1968:927; Giddens, 1973; Parkin, 1971:18-23], common positions within status hierarchies [Warner, 1960; Parsons, 1970:24], or common positions within authority or power structures [Dahrendorf, 1959:138; Lenski, 1966:95]. In contrast to these usages, Marxists define classes primarily in terms of common structural positions within the social organization of production. In contemporary American society this means defining classes in terms of positions within capitalist social relations of production.

For the purposes of the present analysis, position within the social relations of production will be defined by two basic criteria: whether or not the individual owns his or her own means of production, and whether or not the individual controls the labor power of others (i.e. supervises people on the job). These two criteria generate four basic class positions, as illustrated in Table 1. "Ownership of the means of production" is operationalized by the question: "do you work for yourself or someone else." For self-employed individuals, "control of the labor power of others" is operationalized in terms of having employees; for individuals who are not self-employed this

Table 1.

Criteria for Class Position

		Ownership of the Means of Production: YES	Ownership of the Means of Production: NO
Control of the Labor Power of Others	YES	Capitalists	Managers/supervisors
	NO	Petty Bourgeoisie	Workers

criterion is operationalized by the question: "do you supervise the work of others, or tell other employees what work to do?"

One further distinction will be made within this basic class schema. Clearly some of the people who are placed in the manager/supervisor category are purely nominal supervisors. This would be the case, for example, of the head of a work team who served as the conduit for orders from above, but who lacks any capacity whatsoever to invoke sanctions on his or her fellow workers. Proper managers will thus be distinguished from mere supervisors by the question: "do you have any say in the pay and promotions of your subordinates?"

It is important to be clear about the logic underlying these class categories. They are not simply proxies for occupations. Occupation designates the technical function performed by individuals within the labor process; class designates the social relationship within which those technical functions are performed. While of course different class positions have different mixes of occupations, every broad category of occupations is represented within each class category [Wright, 1976a:168-73; Wright and Perrone, 1977].

Hypotheses

The empirical investigation will revolve around six hypotheses.[3]

1. Managers as a whole will receive much higher returns to education than will workers. This basic result has already been established in an earlier study [Wright and Perrone, 1975; 1977]. The rationale underlying this hypothesis is based on an analysis of the specific position of managers within capitalist social relations of production. More concretely, this analysis suggests that within the managerial category there will be a strong link between income and hierarchical position on the one hand and hierarchical position and education on the other.

First, examine the link between hierarchy and income. The behavior of all employees within a capitalist organization is controlled by a combination of repressive sanctions and positive inducements. As you move up the managerial hierarchy, however, the balance between these two modes of control shifts. While repressive controls may be effective in creating conformity to explicit rules, they are not terribly suited to generating responsible and enthusiastic performance of one's job. Because the managerial hierarchy is a hierarchy of increasing responsibility (and in a limited way increasing power as well), there will be a tendency for the behavior of higher managers to be controlled more exclusively through a structure of inducements. The result is that managerial hierarchies will be characterized by a steep income gradient attached to authority position [Tannenbaum et al., 1974:107], even when the education of managers is held constant.

Second, examine the relationship between educational credentials and hierarchical position. In both the working class and the managerial category, education is in part a determinant of the value of the labor power of the individual (or what non-Marxist economists typically call "human capital"). It would therefore be expected that both workers and managers would receive a positive income return to their education. However, among managers, educational credentials serve a second function. In addition to creating genuine skills, education also serves as an institutional mechanism for legitimating inequalities of power within capitalist organizations. In practice this means that there will be a general tendency for people with lower credentials not to be promoted above people with higher credentials, and thus there will be a tendency for managerial hierarchies to be characterized by rather steep educational credential gradients [Tannenbaum et al.,1974:112].

The combination of this steep education gradient and steep income gradient associated with hierarchy means that the managerial category as a whole will be

characterized by an especially high return to education. That is, in addition to the direct return to education resulting from increases in the market value of labor power (skills), which both managers and workers receive, managers receive an additional increment of income for education stemming from the link between the legitimation function of education within hierarchies and the use of income as a control mechanism within authority hierarchies. [For a more detailed discussion of this interpretation, see Wright and Perrone, 1977; Wright, 1976a:105-110].

2. Black males will be more concentrated in the working class than will white males. While we will not explore the actual mechanisms by which individuals are sorted into class positions, nevertheless, it is predicted that one outcome of this sorting process is that blacks will be more heavily concentrated in the working class than will whites.

3. When class position is ignored, black males will receive lower returns to education than will white males. This is the standard finding in sociological studies of racial differences in returns to education. It will be formally tested in order to show that the usual results hold for the data used in the present study.

4. Within the working class, the returns to education for black and white males will be much more similar than for all blacks and all whites. If at least part of the overall difference in returns to education for blacks and whites is a consequence of the class distributions of the two racial categories, then it would be expected that within the working class itself the returns should be much more similar. While white workers may be in relatively privileged working situations compared to black workers, neither white nor black workers occupy positions of authority (by definition) and, thus, neither

receive the legitimation-increment of returns to education discussed in hypothesis 1.

5. Within the supervisor category, the returns to education for black and white males will be more similar than for all blacks and all whites. The argument here is essentially the same as that presented in hypothesis 4. To the extent that the overall racial differences in returns to education is a consequence of class distribution when you look within a single class position--in this case, the very bottom level of the managerial hierarchy--the returns for blacks and whites should be much closer.

6. Within the managerial category, black males will have lower returns to education than will white males. The argument in hypothesis 1 concerning the high returns to education of managers hinged on the dual link between education and hierarchial position and income and hierarchial position. If a particular category of managers is highly concentrated at the bottom of the authority structure, then this education-hierarchy legitimation mechanism will tend to be attenuated. Although no data are available in the present study concerning the hierarchial distribution of race within the manager category, white males can be expected to be much more evenly distributed throughout the hierarchy than black males. If this is the case, then within the managerial category the returns to education for black males should be considerably smaller than returns for white males.

Data

The data for this study come from the eighth wave (1975) of the Panel Study of Income Dynamics, conducted by the Institute of Social Research (ISR)

at the University of Michigan. While in the original year of the panel study the sample was a random sample of 5000 households, by the eighth year of the study, because of successive nonresponses, the sample was no longer genuinely random.[4] While this probably will not seriously affect the regression results, it certainly may affect hypothesis 2 about class distribution of races. Two other data sets, the 1969 Survey of Working Conditions and the 1973 Quality of Employment Survey (both from ISR) will thus be used for hypothesis 2.[5] Throughout the analysis, the samples will be restricted to active participants in the labor force.

Equations

In order to test the hypotheses about class and race interactions with returns to education, two regression equations will be estimated:

$$\text{income} = a + b_1\text{Education} \tag{1}$$

$$\begin{aligned}\text{income} = a &+ b_1\text{Education} + b_2\text{Occupational Status} + b_3\text{Age} \\ &+ b_4\text{Seniority} + b_5\text{Father's Status} + b_6\text{Father's Education} \\ &+ b_7\text{Parental Economic Condition} + b_8\text{Annual Hours Worked.}\end{aligned} \tag{2}$$

In the second equation we will not be specifically interested in the coefficients of the variables other than education. These variables are included in the equation in order to determine whether the class interactions observed in equation (1) may not themselves be mediated by the class distribution of these additional variables. Thus, for example, if in hypothesis 1 the greater returns to education for managers were entirely due to the occupational status distribution across class categories then, when occupational status is included in the equation, the differential returns to education should disappear.

Variables

1. Income is measured by total annual taxable income received by the individual. In addition to wage and salary income, this variable includes income from assets, interest and other sources of unearned income. Both regression equations were also estimated for three other income variables: annual earnings; an estimate of "permanent income" (an average of income over the previous seven years); and imputed hourly wage (wage and salary income divided by total annual hours worked). In none of the comparisons of racial differences in returns to education did the results differ significantly for these alternative income variables [see Wright, 1976a:328-39].

2. Education is operationalized by a quasi-credential scale in which:

0 = no schooling or illiterate

1 = less than elementary school

2 = elementary school

3 = some high school

4 = completed high school

5 = high school plus some nonacademic training

6 = some college

7 = college degree

8 = graduate training

3. Occupational status is measured by the standard Duncan SEI scores. These scores were available only for the seventh wave of the panel study (1974), while the class position questions were asked only in the eighth wave. This means in effect that we have the individual's occupational status score at the beginning of the year in which income was earned, and the class

position at the end of the year (i.e., the beginning of the following year).[6]

4. Age is included in the regression both as a rough control for cohort effects and as a rough measure of years of experience in the labor market.

5. Seniority designates the number of years the individual has worked for the same employer, or the number of years an individual has been self-employed in the same business.

6. Father's status is measured by the average SEI score for the father's gross census occupation category. While this is clearly a much weaker variable than a status score based on the three-digit occupation classification, it is the best available from the panel study data.

7. Father's education is measured by the same scale as respondent's education.

8. Parental economic condition is a scale reflecting the respondents subjective perception of parent's economic status in which:

1 = parents were generally poor

2 = parents were generally about average

3 = parents were generally well-off

9. Annual hours worked is a product of the number of weeks worked in the previous year and the average number of hours worked per week.

Statistical Method

Rather than test the significance of the slope differences in the groups being compared through the conventional dummy-variable interaction model [Kmenta, 1971:419-423], these slope differences will be tested by a direct t-test. That is, the education coefficients will be treated as normally-distributed variables with expected values equal to the coefficient, and a t-test

will be performed by dividing the difference in these coefficients for the groups being compared by the square root of the sum of the squared standard errors of each coefficient. Thus, for equation (1) in hypothesis 1 we have:

Managers: $\text{Income} = a_m + b_m \text{Education}$

Workers: $\text{Income} = a_w + b_w \text{Education}$

$$t = \frac{b_m - b_w}{\sqrt{se_{b_m}^2 + se_{b_w}^2}}$$

where se_{b_m} and se_{b_w} are the standard errors of the coefficients b_m and b_w, respectively. It can be shown that in most circumstances this t-test violates fewer assumptions than the conventional dummy variable interaction strategy [Wright, 1976a:165-67].

Results

Hypothesis 1. Managers as a whole will receive much higher returns to education than will workers. Table 2 indicates that in the simple regression of income on education, workers receive $851 for each increment in education while managers receive $2082. When the various control variables in equation (2) are added, the returns for workers are $655, while the returns for managers are $1403. In both cases the difference in returns is significant at the .01 level. This hypothesis is thus strongly confirmed.

Hypothesis 2. Black males will be more concentrated in the working class than will white males. Table 3 gives the class distribution of black and white males based on an average of the 1969 Survey of Working Conditions and the 1973 Quality of Employment Survey, and the distribution for the Panel Study. Because of the problem of nonrandomness in the Panel Study, the

Table 2

Comparisons of Workers and Managers with Annual Taxable Income as Dependent Variable

A. Regression Equations

		Unadjusted Constant	Education	Occupational Status	Age	Seniority	Father's Education	Father's Occupational Status	Parental Economic Condition	Annual Hours Worked	R^2
Workers (N=1715)											
Eq (1):	B	7193	851.4								.066
	(se)		(77.3)								
	Beta		.26								
Eq (2):	B	-6627	655.1	67.9	122	124	249	-30	263	3.2	.369
	(se)		(92.8)	(7.0)	(11)	(18)	(89)	(7.6)	(87)	(.19)	
	Beta		.20	.25	.27	.16	.07	-.09	.07	.32	
Managers (N=479)											
Eq (1):	B	6481	2081.6								.155
	(se)		(222)								
	Beta		.39								
Eq (2):	B	-6903	1402.7	115.8	184	80	-379	29	-291	1.5	.339
	(se)		(258)	(20)	(37)	(48)	(216)	(18)	(246)	(.60)	
	Beta		.27	.27	.24	.07	-.08	.07	-.05	.10	

Table 2 (continued)

Comparisons of Workers and Managers with Annual Taxable Income as Dependent Variable

B. Comparison of Returns to Education

	Eq(1)	Eq (2)
Difference in education coefficients	1231	748
The t-value of difference	5.2***	2.9**
Workers slope as percent of managers slope	41%	47%
Percent of slope difference in eq (1) eliminated by controls in eq (2)		39%

**Significant at the .01 level (one-tailed test)
***Significant at the .001 level (one-tailed test)

Table 3

Class Distribution within Race Categories

	Average of 1969 Survey of Working Conditions and 1973 Quality of Employment Survey Distribution		Panel Study of Income Dynamics, 1975[a]					
			White Males			Black Males		
			Weighted	Unweighted		Weighted	Unweighted	
	White Males	Black Males	%	N	N	%	N	N
Small employers	11.5%	4.9%	10.9%	302	217	4.1%	11	31
Managers and supervisors	40.2	32.5	39.3	1090	812	24.7	66	196
Managers			18.9	524	401	13.1	35	126
Supervisors			20.4	566	411	11.6	31	70
Workers	43.5	61.4	44.2	1225	984	69.7	186	657
Petty Bourgeoisie	4.9	1.2	5.5	153	117	1.5	4	15
Total	100%	100%	100%			100%		
N	2100	168		2770	2130		267	

[a]Percentages are calculated on the basis of the weighted N. They may not add exactly to 100 because of rounding.

average of two earlier surveys is undoubtedly a more accurate estimate of the actual class distribution of races. It is clear from these results that indeed black males are more concentrated in the working class than white males: 61 percent of all black males compared to only 40 percent of white males fall within the working class.[7]

Hypothesis 3. When class position is ignored, black males will receive lower returns to education than will white males. Table 4 presents the regression equations for all blacks and all whites, for black and white workers, for black and white supervisors, and for black and white managers. Figure 1 graphically presents the results for the simple regression of income on education. Table 5 presents the statistical tests for significance of the differences in returns to education. In the simple regression of income on education, white males receive $1419 for each increment in education; black males receive only $860. When the controls in equation (2) are added, the returns among white males decrease to $1147 and among black males the decrease is to $614. Both of these differences are significant at the .01 level. Thus, as in most studies of black-white differences in returns to education, black males as a whole do receive lower returns than white males as a whole.

Hypothesis 4. Within the working class, the returns to education for black and white males will be much more similar than for all blacks and all whites. In the simple regression of income on education, the returns for all black males are less than one-half of the returns for all white males; within the working class, on the other hand, the returns for black males were slightly over 75 percent of the returns for white males. What is more, when the controls in equation (2) are added, the returns for black male workers become virtually identical to the returns for all white workers, while the returns for

Table 4

Regression Equations within Race-Class Categories with Annual Taxable Income as Dependent Variable

		Unadjusted Constant	Education	Occupational Status	Age	Seniority	Father's Education	Father's Occupational Status	Parents' Economic Condition	Annual Hours Worked	R^2
1. Whites (N = 2145)											
Eq (1):	B	5583	1818.6								.087
	(se)		(127.1)								
	Beta		.30								
Eq. (2)	B	-10519	1147.2	120.4	146	159	-232	6	329	3.1	.268
	(se)		(158.0)	(11.2)	(21)	(29)	(149)	(13)	(158)	(.31)	
	Beta		.19	.26	.17	.13	-.04	.01	.04	.18	
2. Blacks (N = 912)											
Eq (1):	B	6069	860.2								.080
	(se)		(96.8)								
	Beta		.28								
Eq (2):	B	-5273	64.1	78.4	100	30	410	-26	-135	2.9	.376
	(se)		(119)	(8.9)	(14)	(22)	(125)	(10)	(103)	(.24)	
	Beta		.21	.30	.24	.04	.11	-.08	-.04	.33	
3. White workers (N = 984)											
Eq (1):	B	7657	802.6								.055
	(se)		(105.9)								
	Beta		.235								
Eq (2):	B	-6639	656.4	64.8	128	136	238	-39	340	3.2	.359
	(se)		(125.7)	(9.3)	(15)	(25)	(118)	(10)	(120)	(.26)	
	Beta		.19	.24	.28	.17	.07	-.12	.08	.32	

Table 4 (continued)

	Unadjusted Constant	Education	Occupational Status	Age	Seniority	Father's Education	Father's Occupational Status	Parents' Economic Condition	Annual Hours Worked	R^2
4. Black Workers (N = 657)										
Eq (1): B	6246	610.4								.052
(se)		(101.7)								
Beta		.23								
Eq (2): B	-4048	649.0	76.9	83	64	122	-62	113	2.8	.359
(se)		(136.7)	(11.0)	(15)	(24)	(139)	(12)	(103)	(.26)	
Beta		.24	.29	.25	.11	.03	-.19	.04	.36	
5. White supervisors (N = 397)										
Eq (1): B	8827	734.3								.045
(se)		(170.3)								
Beta		.21								
Eq (2): B	-2163	751.2	56.4	73	174	-189	-30	-570	2.7	.343
(se)		(192.3)	(13.5)	(24)	(37)	(200)	(16)	(197)	(.44)	
Beta		.22	.22	.16	.23	-.05	.10	-.14	.26	
6. Black supervisors (N = 123)										
Eq. (1): B	6334	641.5								.083
(se)		(194.1)								
Beta		.29								
Eq (2): B	-2782	966.9	10.0	84	95	279	16	-405	1.7	.230
(se)		(309.6)	(21.5)	(49)	(57)	(275)	(25)	(267)	(.63)	
Beta		.43	.05	.21	.17	.12	.07	-.14	.24	

Table 4 (continued)

	Unadjusted Constant	Education	Occupational Status	Age	Seniority	Father's Education	Father's Occupational Status	Parents' Economic Condition	Annual Hours Worked	R^2
7. White managers (N = 405)										
Eq (1): B	6429	2107.4								.153
(se)		(247.0)								
Beta		.39								
Eq (2): B	-7794	1480.7	118.1	189	109	-400	28.9	-285	1.5	.350
(se)		(281.0)	(21.5)	(39)	(52)	(231.5)	(19.5)	(264.5)	(.67)	
Beta		.27	.27	.24	.10	-.08	.07	-.05	.09	
8. Black managers (N = 72)										
Eq (1): B	7628	1168.5								.134
(se)		(354.2)								
Beta		.37								
Eq (2): B	-1005	-510.5	57.4	135.4	-235.8	550.1	104.4	-167	2.96	.517
(se)		(475)	(27.6)	(75.6)	(89.9)	(436.5)	(35.5)	(591.3)	(.89)	
Beta		-.16	.27	.26	-.36	.16	.40	-.03	.41	

FIGURE 1 Returns to Education for Blacks and Whites in Different Class Positions

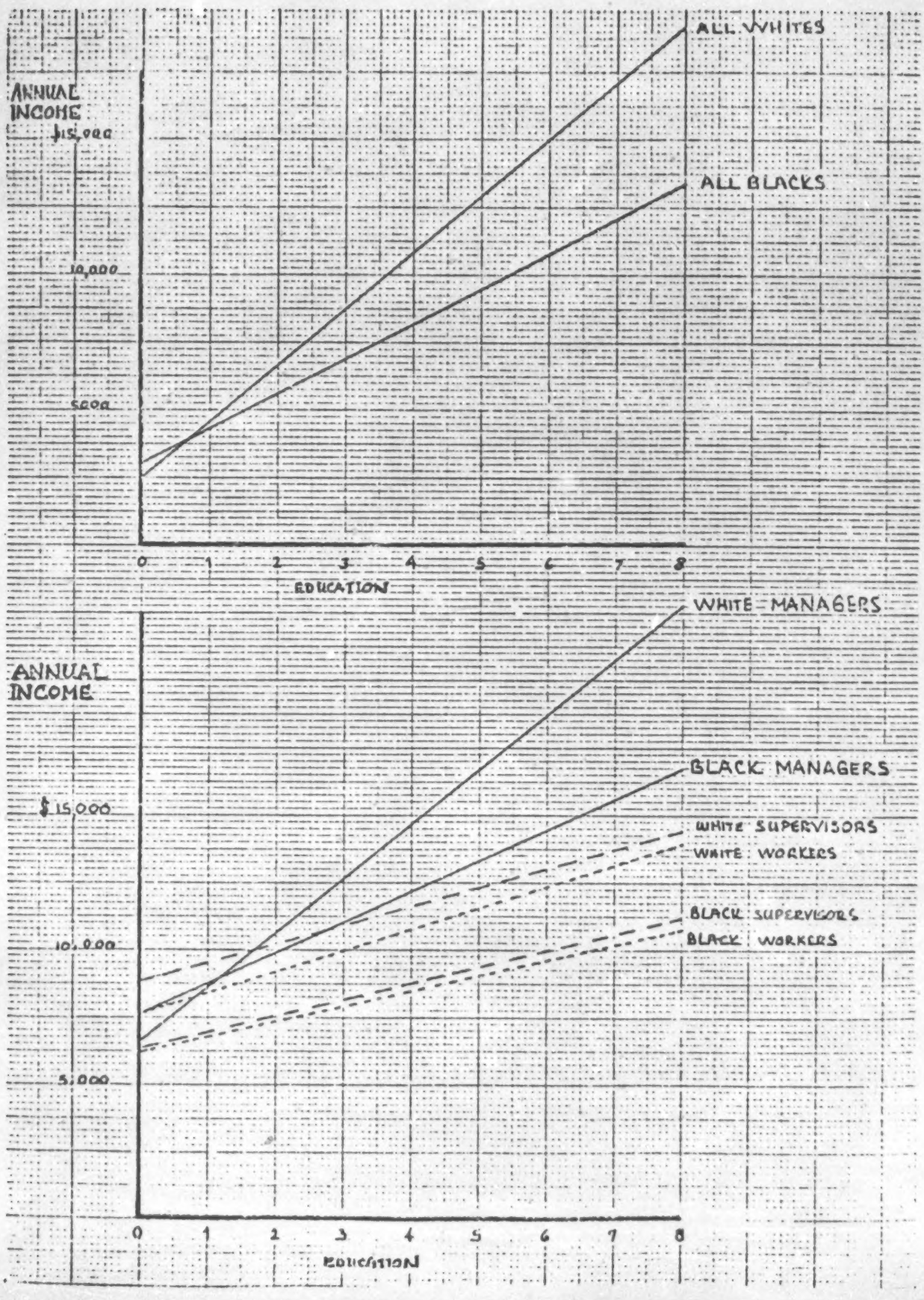


Table 5

Comparison of Returns to Education for Black and White Males across Class Categories and Within Class Categories

	Returns to Education in: Eq (1)	Eq (2)
1. All black and white males		
Slope difference	959	533
The t-value of difference	6.0***	2.7**
Black slope as a % of white slope	49%	54%
Percent of difference in eq (1) eliminated by the controls in eq (2)		44%
2. Workers		
Slope difference	192	7
The t-value of difference	1.3	< 1
Black slope as a % of white slope	76%	99%
Percent of difference in eq (1) eliminated by the controls in eq (2)		97%
3. Supervisors		
Slope difference	93	-216
The t-value of difference	1	1
4. Managers		
Slope difference	938	1991
The t-value of difference	2.2*	3.6***

*Significant at the .05 level (one-tailed test).
**Significant at the .01 level (one-tailed test).
***Significant at the .001 level (one-tailed test).

all black males remain only 54 percent of the returns for all white males. This suggests that within the working class, most of the difference between black and white males in returns to education observed in the simple regression of income on education, is mediated by the control variables in equation (2), whereas this is not the case for all blacks and all whites.

Hypothesis 5. Within the supervisor category, the returns to education for black and white males will be much more similar than for all blacks and all whites. As in the case of black and white workers, this expectation is strongly supported by the results. In the simple regression, black male supervisors receive only $93 less returns to education than do white male supervisors, and in equation (2) they actually receive $200 greater returns (although the difference is statistically insignificant).

Hypothesis 6. Within the managerial category, black males will have lower returns to education than white males. As predicted, black male managers do receive significantly lower returns to education than do white male managers in both regression equations. However, it was not expected that the returns to education among black male managers would be negative in the multiple regression equation. The expectation was merely that, because of restrictions of blacks to lower levels of the authority hierarchy, the hierarchical-promotion mechanism would be blunted among black managers and thus the returns to education should be less among black male managers than for white ones. There was no a priori expectation that those returns would disappear entirely, let alone become negative, in equation (2).

One possible clue to these results might be found in the occupational distribution among white and black managers (Table 6). As would be expected,

Table 6

Occupational Distribution among Managers for Black and White Males

1.	Professional, technical, and kindred	24.6%	22.5%	
	Professionals	22.3		9.3
	Technicians	3.0		0.0
	Teachers	2.3		13.2
2.	Managers and administrators	35.2	25.0	
3.	Sales	4.7	..8	
4.	Clerks	1.9	1.7	
5.	Craftsmen and kindred	20.5	13.3	
6.	Operatives, laborers and miscellaneous	13.1	38.5	
	Total	100%	100%	

Note: Percents may not total exactly 100 because of rounding.

black male managers are considerably more concentrated among unskilled and semi-skilled manual occupations than are white male managers (38.5 percent compared to 13 percent, respectively). What is somewhat surprising is the much higher proportion of black managers who are teachers compared with white managers (13 percent compared to 2 percent, respectively). Expressed in a different way, nearly 60 percent of the black managers in professional or technical occupations are teachers compared to less than 10 percent of white professional-technical managers. Remember, these are real managers, people who state that they have some say in the pay and promotions of their subordinates, rather than mere supervisors. This implies that teacher-managers, either occupy administrative positions within their education institutions, or direct research projects in which they have say in the pay and promotions of research staff (all but one of the teacher-managers were college or university teachers).

If the regressions in Table 5 are rerun excluding teachers from the managerial category, the results are much more as expected (Table 7). Black male managers still have lower returns to education than do white male managers (although the differences are no longer statistically significant), but the returns are not nearly as small as returns in the regressions that included teachers.

I cannot offer a particularly coherent explanation for why the presence of so many teachers among black managers should have such a drastic effect on the education coefficient in equation (2). Most likely, this result has something to do with the interrelationship of education, occupational status and income among this specific subgroup of managers; but to say this merely describes the problem rather than providing a theoretical explanation.

Table 7

Returns to Education for Blacks and Whites within the Manager/Supervisor Category, Excluding Teachers

	TOTAL ANNUAL INCOME	
	Eq(1)	Eq(2)
1. Supervisors		
a. White males	732 (182)	761 (208)
b. Black males	506 (217)	934 (350)
c. Difference	226	-173
d. The t-value	ns	ns
2. Managers		
a. White males	2154 (256)	1570 (293)
b. Black males	1582 (476)	724 (577)
c. Difference	572	690
d. The t-value	ns	1.2

Discussion: The Interplay of Racism and Class Relations

It would be a mistake to interpret these results as indicating that all racial discrimination is really disguised class oppression. While it is true that the differential returns to education for blacks and whites largely disappear when we control for class (except in the case of managers), this does not imply that race is an insignificant dimension of inequality in American life. The empirical and theoretical problem is to sort out the complex interplay of racism and class relations, not to obliterate the former in the later.

In terms of the present analysis, there are two basic ways in which racism plays a part in income inequality.[8] First, racism is implicated in the distribution of individuals into different class positions. While we have not been able to analyze the social mechanisms that sort people into class positions in this study, racial discrimination in various forms undoubtedly plays a decisive role in the greater concentration of blacks than whites within the working class and within the bottom levels of the managerial category.

Second, within classes there are still substantial income differences between black and white males even if the returns to education tend to be similar. This is easily seen in Figure 1, where the regression line for white workers is above that of black workers at every level of education. One way of assessing this gap in income is to see what the expected difference in income between a black and white worker would be if they both had some intermediate value on the independent variables included in a regression equation. In Table 8 this gap is calculated at levels of the independent variable halfway between the means for each group in the specific comparison being made. Thus, in the simple regression of income on education for the comparison of black and white workers, the income gap is assessed at a value of education equal to

Table 8

Average Income Gaps between Races
within Class Categories

	TOTAL ANNUAL INCOME		
	mean income	Eq(1)	Eq(2)
1. All Respondents			
Gap in income	5308	3698	1868
Black expected income as percent of white expected income	64%	73%	85%
Percent of difference in means eliminated by controls		30%	65%
The t-value of gap		12.2***	6.8***
2. Workers			
Gap in income	2870	2203	1428
Black expected income as percent of white expected income	75%	80%	86%
Percent of difference in means eliminated by controls		23%	49%
The t-value of gap		8.5***	6.3***
3. Supervisors			
Gap in income	3872	2896	2140
Black expected income as percent of white expected income	69%	76%	82%
Percent of difference in means eliminated by controls		25%	45%
The t-value of gap		5.8***	4.3***

Table 8 (continued)

4. Managers			
Gap in income	5051	3707	3011
Black expected income as percent of white expected income	72%	79%	83%
Percent of difference in means eliminated by controls		27%	40%
		Eq(1)	Eq(2)
The t-value of gap		4.6***	4.1***

Note: Independent Variables: Eq(1) = education only
Eq(2) = education, age, seniority, background, occupational status and annual hours worked.

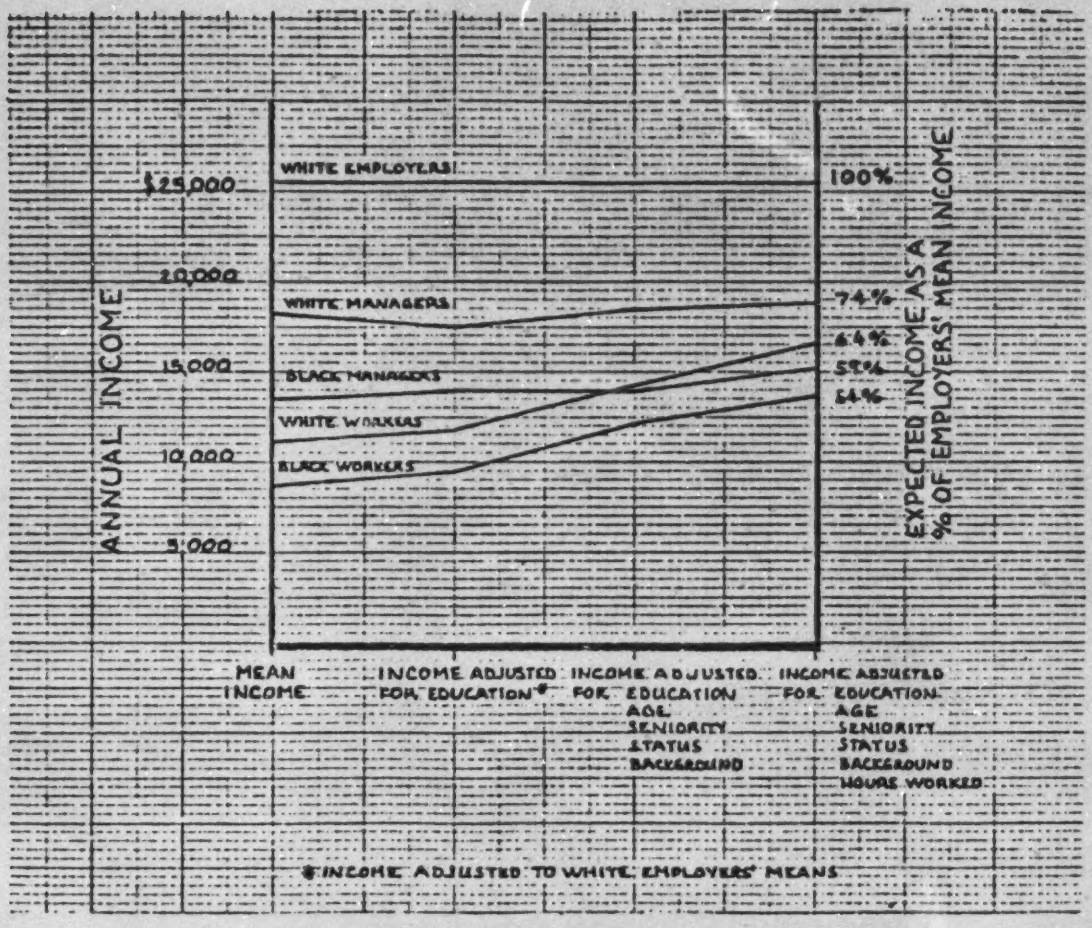
*** Significant at the .001 level (one-tailed test).

$\frac{\bar{E}_{\text{black worker}} + \bar{E}_{\text{white worker}}}{2}$. The statistical significance of this income gap can be tested in an exactly analogous way to the test of slope difference, only in this case a t-test is performed on the constant term in the regression adjusted to the appropriate values of the independent variables [see Wright, 1976:155-57].

As can be seen from Table 8, the income gaps between races are large and statistically significant for both regression equations within every class category. Furthermore, the addition of the various controls in the multiple regression reduces the total difference in mean incomes between races within classes by no more than 50 percent, indicating that a substantial portion of the difference in mean incomes between races within classes should probably be directly attributed to racial discrimination. Racial divisions within classes are thus quite significant and must be taken into account in any analysis of income inequality.

While racism thus must be seen as having an independent impact on income inequality, nevertheless class differences in income are generally greater than race differences. If the expected incomes of all race and class categories are assessed at a common point—say the level of the independent variables for white employers--then the income gap between classes is much larger than between races.[9] This is illustrated in Figure 2. The mean income of white workers is less than one-half that of white employers, and 62 percent of the mean income of white managers; the mean income of black workers, on the other hand, is 75 percent of white workers' mean income. In absolute dollar amounts, the mean white workers' income is over $14,000 less than the mean white employers' income, whereas the mean black workers' income is only $2900 less than the mean white workers' income. When the various controls in equation (2) are added, the expected incomes of both black and white workers (evaluated at the white employers means on the independent variables)

FIGURE 2 Comparison of Income Differences Between Races and Classes



increase considerably. Yet, the difference between workers and employers is still considerably greater than the differences between workers of the different races.

These results taken together have important implications both for Marxist and non-Marxist social scientists. There has been considerable debate within the American Left on the relationship between class exploitation and racial discrimination. One popular position, especially in the late 1960s, was that the white working class as a whole "exploited" the black population, at least in the sense that white workers benefited economically from racism. The results presented above do not demonstrate whether or not white workers share in the fruits of racial oppression.[10] But they do indicate that compared with even small employers--let alone proper capitalists--the common position of black and white workers within the social relations of production generates a basic unity of economic situation.

For non-Marxist social scientists the results of this study demonstrate the centrality of class relations in understanding social inequality. While the findings hardly establish the overall validity of the Marxist paradigm, they do indicate that any systematic study of social inequality must include an anlysis of the interactions between class relations and other dimensions of inequality.

NOTES

[1]The only study I know of which claims to present different findings from these results is the research of Ross Stolzenberg [1973; 1975a]. Stolzenberg estimates a rather complicated income determination equation within 67 detailed occupational categories for both black and white males. He then compares the partial derivatives of income with respect to education for the equations and finds that in nearly one-half of the occupation categories the partial derivative is larger for blacks than for whites. Thus, he concludes that

> Earlier findings suggesting high within-occupation racial differences in wage returns to schooling (e.g., Siegel 1965; Thurow 1967) were probably artifacts of the gross occupational classifications used. These past findings appear to have been produced by the tendency of black men to be concentrated in the lowest-paying <u>detailed</u> occupation categories within the major occupational group in which they are employed [1975a: 314].

The problem with this conclusion is that Stolzenberg uses a natural logarithmic transformation of income whereas Siegel uses raw dollars. This means that Stolzenberg is estimating (approximately) <u>rates</u> of returns to education rather than <u>absolute</u> returns. It may well be that the absolute returns to education within the detailed occupational categories might still not have differed significantly between blacks and whites, but Stolzenberg's results do not demonstrate this. I ran Stolzenberg's equation using the data in the present study, calculated the partial derivatives for all blacks and all whites and discovered that the <u>rates</u> of return for <u>all</u> blacks were significantly greater than for all whites

(Stolzenberg does not report the results for all blacks and all whites). Stolzenberg's results thus indicate that these higher rates of return to education for black men as a whole can also be found within about one-half of the detailed occupations held by black men. His results do not indicate that the absolute returns for black and white men are the same within detailed occupations.

[2]For a more detailed discussion of this operationalization of class, see Wright [1976a: 137-39]. For an extended discussion of the concept of class within the Marxist tradition see Wright [1976a: 20-90; 1976b] and Poulantzas [1975].

[3]All of the hypotheses that follow center on the relationship of the working class and the managerial category to racial differences in returns to education. Since such a small percentage of black males are either capitalists or petty bourgeois it is impossible, using the sample available for this study, to examine systematically the interactions of these class positions with race.

[4]Two things need to be noted concerning nonrandomness of the sample in the Panel Study of Income Dynamics. First, whenever an individual left the original household in the study (because of divorce or following high-school graduation, etc), the "split-off" was also indicated in the subsequent years of the panel. Thus, the sample is not particularly skewed on age distribution. Secondly, a fairly complex system of weights has been devised to at least partially correct for nonrandomness in nonresponse. Thus, the regression results in the present study are probably reasonably reliable in spite of the nonrandomness of the sample.

[5]A discussion of these data sets can be found in Wright [1976a: 132-35].

[6]One other minor point concerning the status variable: about 6 percent of the sample represents "split-offs" in the 1976 year of the survey, i.e., they left a household after the 1974 survey and set up a new family unit. For these people a three-digit occupation classification was not available, and thus in these cases the Duncan score is based on the average SEI value for the gross census occupation categories.

[7]If anything these figures underestimate the proportion of the black male population in the working class, since unemployed persons are excluded from both the Survey of Working Conditions, and the Quality of Employment Survey. If one assumes that most unemployed black males belong in the working class, then the actual proportion of black males who are workers would probably be closer to 70 or 75 percent, and of white males closer to 45 or 50 percent.

[8]We are confining the present discussion to the strictly economic side of racism as reflected in income inequality. Needless to say, as many authors have argued, one of the crucial consequences of racism is the creation of political and ideological divisions within the working class that ultimately operate to lower the incomes of white workers as well as black workers. For a particularly interesting discussion of the relationship of racism as a political and ideological force to income inequality, see Reich [1973] and Szymanski [1976].

[9]This is equivalent to the familiar cross-substitution technique employed by Duncan [1969] and others.

[10]See Reich [1973] and Szymanski [1976] for a discussion of this question, and an empirical demonstration that white workers are hurt by racism.

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